

# nSMOL Antibody BA Kit

LC/MS/MS Sample Prep Kit for Quantitative Analysis of Monoclonal Antibodies

nSMOL Technology  
Increasing Confidence in Therapeutic  
Monoclonal Antibody Bioanalysis



LCMS-8060

nSMOL (nano-surface and molecular orientation limited proteolysis) is Shimadzu's proprietary, innovative technique that enables selective proteolysis of the Fab region of monoclonal antibodies. The nSMOL Antibody BA Kit is a ready-to-use reagent kit for collecting monoclonal antibodies from blood or other biological samples using immunoglobulin collection resin, and then performing selective proteolysis of the Fab region of these antibodies via trypsin-immobilized nanoparticles. Variable region-derived peptides produced by limited proteolysis can then be quantified via MRM measurements utilizing a high-performance LCMS-8050/8060 triple quadrupole liquid chromatograph mass spectrometer. An unparalleled convenient and rapid workflow provided by the nSMOL Antibody BA Kit dramatically improves the productivity and robustness of LCMS mAb bioanalysis.

## • Faster, Less Expensive Method Development:

Dramatically improves response and quantitative repeatability.

No capture antibodies or ligands required.

## • nSMOL Proteolysis:

Selective collection of Fab peptides.

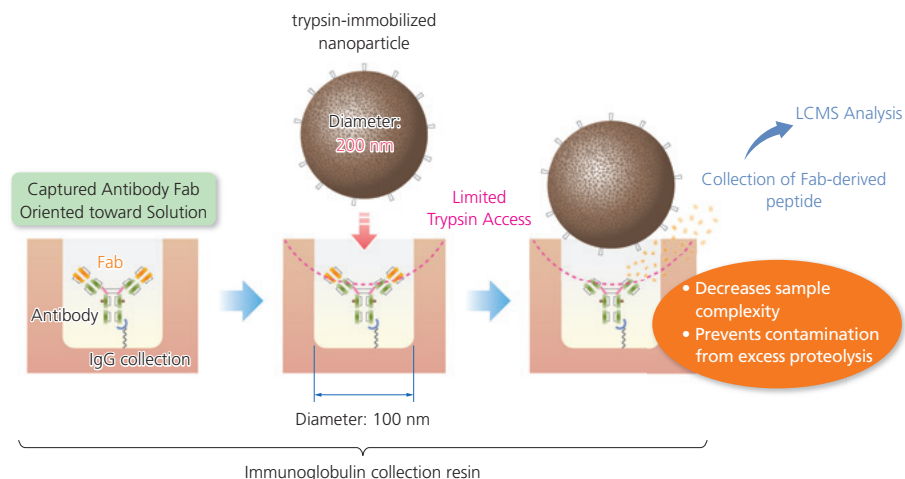
Limits contamination from excessive peptides or trypsin.

## • Performance:

Highly sensitive and accurate assays are possible for a variety of antibodies.

## • Highly Versatile:

Applicable to a wide variety of pharmaceutical antibodies.



# nSMOL Antibody BA Kit

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## Kit Contents

The nSMOL Antibody BA Kit provides prepared reagents and protocols for sample prep via the nSMOL method.

Reagent	Quantity	Capacity	Storage Temperature
Immunoglobulin collection resin	2	1.3 mL/each	4 °C
Wash solution 1 (Binding solution)	1	80 mL	4 °C
Wash solution 2	1	80 mL	4 °C
Reaction solution	1	10 mL	4 °C
Enhanced reaction solution	1	Freeze-dried	4 °C
Reaction stop solution	1	1 mL	4 °C
FG beads Trypsin DART	1	1.1 mL	-20 °C *1

\*1: If it is being stored for a month or longer, store it at -80 °C.



Note: The reagent kit is transported at refrigeration temperatures (2 to 8 °C).

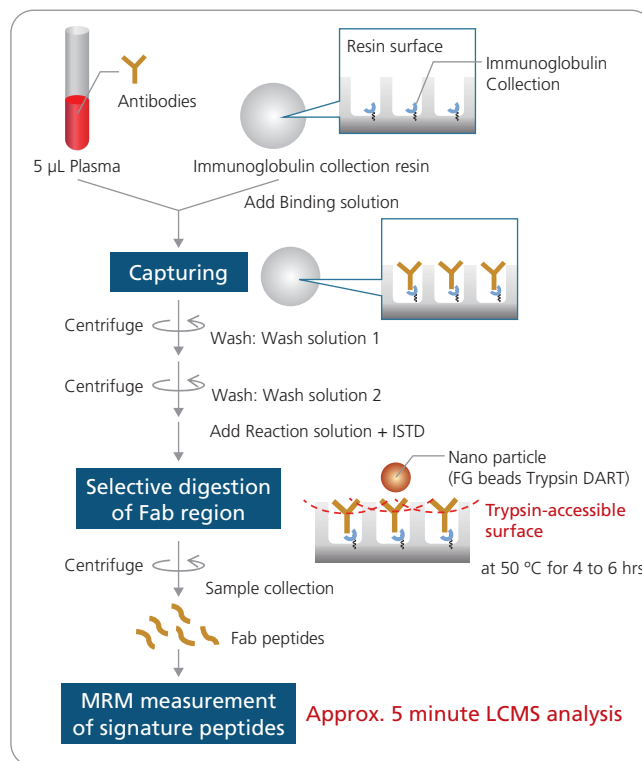
The following consumables are purchased separately.

Specified Consumables	Manufacturer	P/N
nSMOL reaction socket tube	SHIMADZU	225-32260-91
		225-32260-92
Ultrafree-MC, GV 0.22 µm	Merck Millipore	UFC30GV00
		UFC30GVNB
Micro tube 2mL, PP	SARSTEDT	72.708

Note: For other equipment required, please refer to instruction manual.

## Simple Workflow

This kit enables highly reproducible data and avoids the troublesome steps of denaturing, reduction, and alkylation normally associated with protein digestion. There is also no need for solid phase extraction after reaction. After nSMOL preparation, samples can be injected directly onto the LCMS.



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